UNITED STATES DISTRICT COURT WESTERN DISTRICT OF TEXAS WACO DIVISION

THETA IP, LLC.

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC.,

Defendants

Case No. 6:20-cv-00160-ADA

JURY TRIAL DEMANDED

DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT

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EXHIBIT LIST

Exhibit	Description
Ex. 1	Deposition of Theta's technical expert, Lawrence E. Larson, October 29, 2021.
Ex. 2	Expert report of Theta's technical expert, Lawrence E. Larson, regarding purported infringement, September 17, 2021

I. INTRODUCTION

Theta cannot show that the accused products perform the bias adjustments of '962 Claim 1 and '202 Claim 13; meet the "worst-case" limitations of the '825 Patent claims 3 and 8, and '202 claims 7 and 13; or meet the "comparing" step of each of the '202 Claims. Summary judgment of non-infringement is thus appropriate on all the Asserted Patents.

II. BACKGROUND

A. The Asserted Claims

A wireless transceiver consumes power when listening for and processing a signal, such as a desired phone call. The Asserted Patents are directed to methods for reducing power consumption when the received signal has certain characteristics related to the strength of "desired signal" and "interferer signals." Based on whether the "desired signals" and "interferer signals" are "high" or "low," the patents teach either increasing or decreasing the amount of power consumed in receiving the signal. To do this, the patents discuss dynamically changing bias current, impedance, or both to reduce power dissipation. The concept is encapsulated in the numbered clauses of '962 claim 1:

- wherein the bias current and the impedance of the circuit in the receiver signal path of the wireless transceiver are varied according to the following:
- (i) when the signal strength of the interferer signal is high and the signal strength of the desired signal is low, the bias current of the circuit in the receiver signal path of the wireless transceiver is increased and the impedance of the circuit in the receiver signal path of the wireless transceiver is reduced, resulting in a first current drain;
- (ii) when the signal strength of the interferer signal is high and the signal strength of the desired signal is high, the bias current of the circuit in the receiver signal path of the wireless transceiver is increased while the impedance of the circuit in the receiver signal path of the wireless transceiver is increased,

¹ Theta has identified the following asserted claims: U.S. Patent No. 9,838,962 ("'962 Patent"), Claim 1; 10,129,825 ("'825 Patent"), Claims 3, 8; 10,524,202 ("'202 Patent"), Claims 7, 13 (collectively "Asserted Claims" and "Asserted Patents").

resulting in a reduction in current drain when compared to the first current drain;

- (iii) when the signal strength of the interferer signal is low and the signal strength of the desired signal is low, the bias current of the circuit in the receiver signal path of the wireless transceiver is reduced and the impedance of the circuit in the receiver signal path of the wireless transceiver is reduced resulting in reduced current drain when compared to the first current drain; and
- (iv) when the signal strength of the interferer signal is low and the signal strength of the desired signal is high, the bias current of the circuit in the receiver signal path of the wireless transceiver is decreased² and the impedance of the circuit in the receiver signal path of the wireless transceiver is increased, resulting in a reduction in current drain compared to the first current drain.

For example, clause (iii) requires that when the desired signal is "low" and the interferer is "low," the actions to take are to reduce bias current and reduce impedance. This has the effect of reducing power consumption compared to the "first current drain" of clause (i). At the minimum, in order to practice the invention, one must (a) determine the strength of the desired signal, (b) determine the strength of the interferer signal, (c) determine if the signals are "high" or "low", and (d) make a defined change to bias current, impedance, or both.

The Asserted Claims also describe a specific case called the "worst-case power dissipation condition," which is when the power dissipation (consumption) is at its highest. Claims 3 and 8 of the '825 Patent require:

wherein a worst-case power dissipation condition from the battery results when the signal strength of the desired signal is low and the signal strength of the interferer signal is high

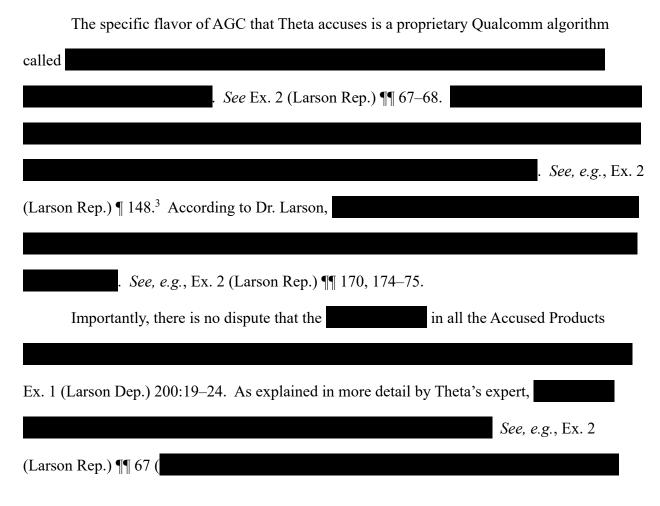
To satisfy this element, Theta must prove that the receiver goes into the highest power consumption mode, *i.e.* the worst case, when the desired signal is low and the interferer is high.

² This word was changed from "increased" to "decreased" by certificate of correction.

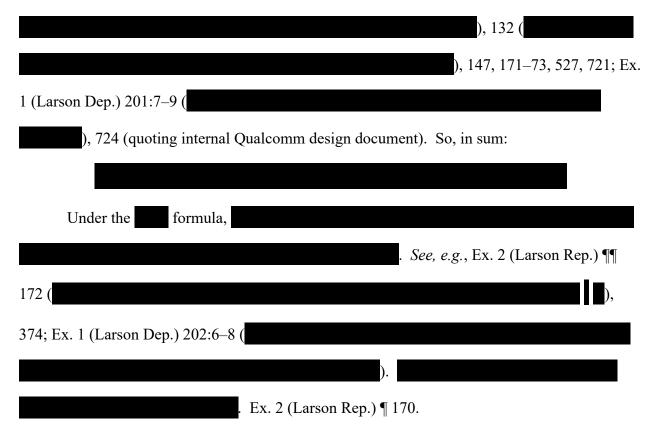
B. Theta's Infringement Theory

Theta's original complaint accused an old Qualcomm technology called "IntelliCeiver," allegedly built into current Qualcomm radio transceivers. D.I. 1 ¶ 51.

Theta then abandoned the IntelliCeiver theory a year into the case and shifted its accusations toward the Qualcomm automatic gain control ("AGC") function in the transceivers. AGC was well-known in the prior art, as acknowledged in the Asserted Patents and by Theta's expert. *See, e.g.*, '825 Patent Fig. 1 (RF AGC 166, BaseBand AGC 120), 3:62–64, 4:22–23; Ex. 1 (Larson Dep.) 41:25–42:19, 43:9–12, 45:2–4.



³ An increased "gain state" corresponds to decreased gain.



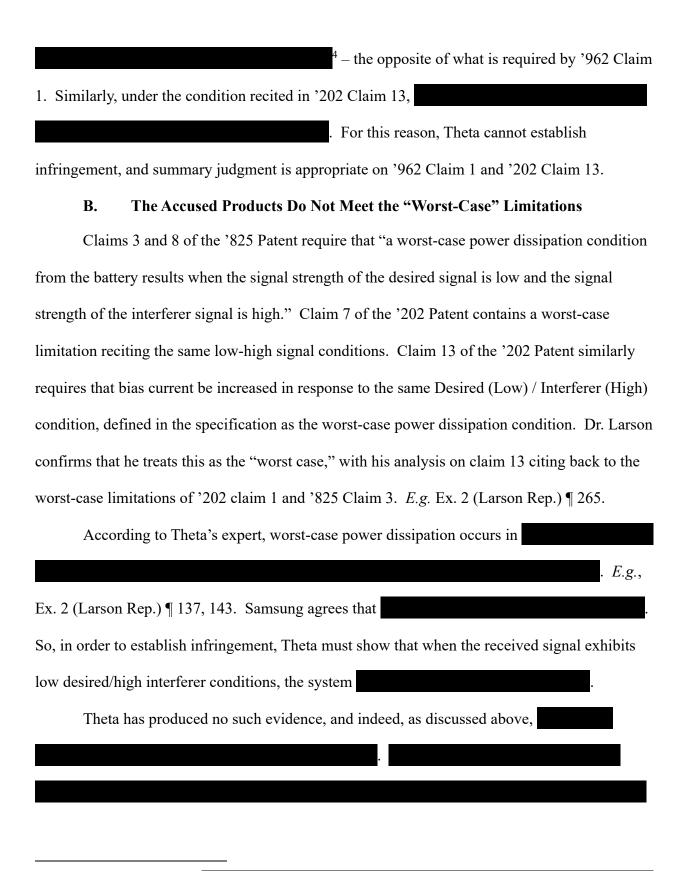
III. ARGUMENT

A. The Accused Products Do Not Perform Certain Claimed Adjustments

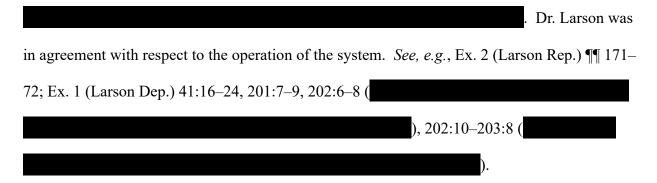
Several Asserted Claims require that bias current be increased when the interferer signal is high or decreased when the interferer signal is low. For instance, '962 Claim 1, clause (i) sets the "first current drain" when the receiver is in the Desired (Low) / Interferer (High) condition and requires a reduction in bias current when the transceiver moves to clause (iii), where the signals are Desired (Low) / Interferer (Low). '202 Claim 13 similarly requires an increase in bias current when the receiver is in the Desired (Low) / Interferer (High) condition.

The accused algorithm, however, makes the opposite adjustment. Reducing the interferer signal from the high level in clause (i) to the low level in romanette (iii)

. Accordingly, as the receiver moves from clause (i) to (iii),



⁴ As explained above, *See, e.g.*, Ex. 1 (Larson Dep.) 200:19–24; Ex. 2 (Larson Rep.) ¶¶ 67, 132, 147, 171–73.



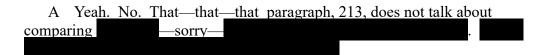
It is Theta's burden to come forward with competent evidence to support its infringement claim. But Theta cannot meet its burden because the accused algorithm works in the opposite manner of the claims. Summary judgment on '825 Claims 3 and 8, and '202 Claims 7 and 13 is therefore appropriate.

C. Summary Judgment of No Infringement on the '202 Patent is Appropriate Because the Accused Products Do Not Perform the "Comparing" Step

Claims 7 and 13 of the '202 Patent require "comparing the strength of the desired signal relative to the strength of the interferer signal." Proof of the presence of this element would require showing (1) where the strength of the desired signal is determined, (2) where the strength of the interferer signal is determined, and (3) where those two values are compared, presumably at a particular place in the Qualcomm source code.

Dr. Larsen's report provides no such disclosure. The closest he came in his report is a discussion of Ex. 2 (Larson Rep.) ¶ 212–14. But at his deposition, he acknowledged that this step merely determines the interferer signal strength and does not satisfy the rest of the claim limitation:

- Q Okay. So in paragraph 213 of your report, none of the—none of the sentences there describe a compare of the signal strength of the desired signal to the signal strength of the interferer signal. Correct?
- A So those—those words are—and once again, we are talking about 213. Right?
 - Q Of your report, correct.



Ex. 1 (Larson Dep.) 360:5–17; *see also* Ex. 1 (Larson Dep.) 219:16–220:9, 221:10–25, 225:10–226:7, 229:24–230:9, 361:5–17, 361:18–362:8, 365:20–367:12.

Nor did Dr. Larson identify any other comparison in the accused products⁵:

 $Q \cdot So$ in section [d], spanning paragraphs 211 through 215, you have not shown what in the shown what in the shown the compare of the strength of the desired signal to the strength of the interferer signal. Correct?

[objection]

A Yeah. In those paragraphs the—I have not explicitly shown a precise—not—I have not explicitly shown a comparison of the and, to be honest, because I don't think it's necessary.

Ex. 1 (Larson Dep.) 368:17–369:7.

Dr. Larson did not provide a basis in his report from which a reasonable jury could conclude that the comparing step has been met. Accordingly, summary judgment of non-infringement is appropriate on each claim of the '202 Patent.

IV. CONCLUSION

Summary judgment of non-infringement of all the Asserted Patents should be entered for Samsung for the reasons explained above.

⁵ Dr. Larson's infringement analysis of the limitation "[d] The S21 Accused Products compare the strength of the desired signal to the strength of the interferer signal" spans paragraphs 211–15. Ex. 2 (Larson Rep.) ¶¶ 211–15. His analysis of this limitation for other claims that contain the term as well as for different products merely cite back to this section, or contain substantially the same analysis. E.g., id. ¶¶ 235, 263, 413–17, 437, 465, 614–18, 638.

Dated: November 12, 2021 Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document was filed and received by all counsel of record using the Court's CM/ECF system on November 12, 2021.

/s/ S. Michael Song
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